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**AN ORDINAL
CLASSIFICATION FOR THE
FAMILIES OF FLOWERING
PLANTS**

The Angiosperm Phylogeny Group¹

ABSTRACT

Recent cladistic analyses are revealing the phylogeny of flowering plants in increasing detail, and there is support for the monophyly of many major groups above the family level. With many elements of the major branching sequence of phylogeny established, a revised suprafamilial classification of flowering plants becomes both feasible and desirable. Here we present a classification of 462 flowering plant families in 40 putatively monophyletic orders and a small number of monophyletic, informal higher groups. The latter are the monocots, commelinoids, eudicots, core eudicots, rosids including eurosids I and II, and asterids including euasterids I and II. Under these informal groups there are also listed a number of families without assignment to order. At the end of the system is an additional list of families of uncertain position for which no firm data exist regarding placement anywhere within the system.

Why rearrange families, still less formalize orders? Higher-level classifications, the grouping of species into families, orders, etc., are needed as reference tools not only in systematics but also in many other branches of biology. Knowledge of phylogenetic relationships of major groups of organisms, that is, a phylogenetic perspective, is becoming increasingly important, and hence the need for a phylogenetic classification as a reference tool is also becoming imperative.

Our primary focus is on orders with a secondary emphasis on families of flowering plants. The family is central in flowering plant systematics. For example, in studying an unknown plant we usually first identify it to family. The orders, on the other hand, have until quite recently been of little importance, either being morphologically unrecognizable or in most cases lacking any evolutionary coherence (Heywood, 1977; Merxmüller, 1977). However, orders are useful in teaching, for studying

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family relationships, and in positioning genera of doubtful affinity. The didactic value of suprafamilial groupings has been emphasized by various authors (e.g., Dahlgren, 1975; Thorne, 1976; Davis, 1978; Takhtajan, 1997). This value is even more evident now that the phylogeny of flowering plants is being disclosed in increasing detail. Many of the orders recognized by earlier authors are not monophyletic, yet there is a pressing need for names to communicate the knowledge of monophyletic groupings of families that are becoming evident. With the major branching sequence of flowering plant phylogeny becoming clearer, a revised familial and ordinal classification is feasible.

Flowering plant classification systems from the late 1970s seemed to be stable and show substantial agreement, but this stability has been rudely shattered as new kinds of data and new methods of analyzing conventional data have become firmly established (Stevens, 1986). Classifications such as those by Cronquist (1981) and Takhtajan (1980), although still in frequent use, have become outdated. Of more recent classifications, that by Goldberg (1986) of the dicotyledons predates the advent of molecular studies at higher levels, as does that by Dahlgren et al. (1985) of the monocotyledons. However, the latter incorporated much new data and provided synapomorphy schemes for many groups. The recent system of Takhtajan (1997), although extremely elaborate, is made less useful because his propensity for splitting often results in well-known families being dismembered, then reassembled as orders. Furthermore, the findings of recent molecular studies, despite being cited, have hardly influenced his classification.

We conclude that there is a great need for a new, phylogenetic classification of flowering plants, providing names for major monophyletic groups of families. Obviously, it is not possible, nor is it desirable, to name all clades in the entire phylogeny. Any such complete classification would be so cumbersome that it would be useless for general communication. Systematists need to come to some kind of agreement concerning which clades to recognize and name, so that a reference tool of broad utility can be formulated and used to discuss diversity. An ordinal classification of flowering plant families is here proposed for that purpose (pp. 538–542). It recognizes a selected number of monophyletic suprafamilial groups, that is, clades in the phylogeny of flowering plants that are supported by at least one, and often several, lines of evidence. These are clades to which we find it useful to refer when we communicate information about higher-level interrelationships of the flowering plants.

We note that the selection of clades to be represented in a formal classification is different from the procedure of naming these clades. The latter issue of biological nomenclature in phylogenetics is currently much debated (e.g., Cantino et al., 1997; de Queiroz, 1997; Lidén et al., 1997), but we have not adopted any "phylogenetic naming" sensu de Queiroz and Gauthier (1994). We operate under the current *International Code of Botanical Nomenclature* (Greuter et al., 1994) and choose to emphasize the ranks of family and order. The Linnaean categories serve as a convenient mnemonic device for remembering hierarchical relationships, but it should of course be realized that groups of the same rank are evolutionarily non-comparable units unless they are sister groups.

There are noteworthy problems when establishing the names for taxa at ordinal and other higher taxonomic levels. Until recently, little attention has been paid to the nomenclature at these levels, and our knowledge of the early literature in which such names were used is imperfect. This situation has in considerable part been rectified by Reveal's (1998) Herculean labors. The principle of priority is not mandatory for taxa above the rank of family, although authors are exhorted "generally" to follow this principle (Greuter et al., 1994). We have tried to balance priority with general usage when assigning names to orders, but even if future bibliographic work discloses earlier ordinal names, changes are not mandated.

Which clades should be recognized in classification, or in our case, how should the orders be circumscribed? Given the primary principle of monophyly, that of recognizing clades and not grades in classification, there are nevertheless many considerations to be taken into account when circumscribing taxa at ordinal as well as all other hierarchical levels above that of species. Classification is not only a matter of grouping according to the principle of monophyly, but it is also a matter of communication (note that whatever philosophy of naming is adopted, there has to be some consensus as to the clades we are going to use in general botanical communication). For us, this raises the question of ranking, that is, after having selected clades in the phylogeny to be named, they have to be assigned an appropriate place in the hierarchy, in our case, family and order (e.g., Backlund & K. Bremer, 1998; Stevens, 1998). In choosing between alternative circumscriptions it is desirable to recognize groups that are well supported. It is also useful to select groups that have some kind of easily observed morphological synapomorphies, although this may be difficult at the ordinal level and

even sometimes at the family level. Synapomorphies also often include (sometimes exclusively) anatomical, biochemical, and developmental characters.

Many of our ordinal names are already well established and used in earlier classifications and systematic treatments. So far as they represent monophyletic groups, we retain well-known orders in the interest of preserving stability. In other cases, the size of the orders comes into consideration. However, what is reasonably broad circumscription? From the point of view of memorization of names, groups of 2–6 or a few more would seem to be ideal, and there is evidence that systematists in the past have commonly recognized groups of this size (Stevens, 1997). However, with the discoveries of new species, genera, and families, the sizes of genera, families, and orders have increased, and many orders now comprise 10–20 families, or even more. Other orders contain a few families only, and if there are only two or three families in an order, “one is not far from leaving the families unplaced” (Copeland, 1957). Concerns about the doubtful value of recognizing similarly small groups have also been expressed by others (e.g., Burtt, 1977). Nevertheless, we have chosen to recognize a number of small orders because these represent clades for which monophyly and relationships are well supported, and this better conveys the interrelationships of the families included rather than leaving them unclassified to order.

In general, we adopt a broad circumscription of the orders. We recognize 462 families and 40 orders of flowering plants. Cronquist (1981) recognized 321 families and 64 orders, Thorne (1992) 440 families and 69 orders, and Takhtajan (1997) no less than 589 families in 232 orders. Our wider ordinal circumscription is not because finer details of the phylogeny within the orders are as yet unclear, but because we think the classification will be more useful with a limited number of larger orders. As we develop more firmly supported phylogenies within and among orders, groups at the infraordinal and supraordinal levels can be recognized. Hence we anticipate that there will be little need to change the circumscription of the orders recognized here, except for inclusion of yet unassigned families of unknown systematic position and the transfer of misplaced families. Additional orders may have to be recognized as the phylogenetic relationships of families that are not yet placed are clarified. Discussion as to whether a widely accepted monophyletic group should be a superorder, order, suborder, or family is largely vac-

uous because this will always be an arbitrary decision.

Takhtajan (1997) opted in favor of “smaller, more natural families and orders, which are more coherent and better-defined, where characters are easily grasped, and which are more suitable for information retrieval and phylogenetic studies, including cladistic analyses (e.g., because it reduces polymorphic codings).” However, the size of a group has nothing to do with its “naturalness.” For a smaller group, one will often be able to say more about all of its constituent members, and so the characters may be more easily grasped. However, segregates of well-established monophyletic families like Rubiaceae (Gentianales) or Asteraceae (Asterales) would by Takhtajan’s generalization also be more natural; by this criterion, the smaller the group, the more natural it will necessarily be, so there is no ranking criterion to be derived from “naturalness.” If by “more natural” is meant “has more synapomorphies” then this, too, is incorrect; the number of synapomorphies is not connected to the size of the group or the hierarchical level at which it is recognized.

In our classification, these considerations have had little impact. The principle of monophyly in combination with the desirability of maintaining already well-established and familiar entities has largely formed the ordinal classification. Monofamilial orders (and monogeneric families) are avoided as much as possible, minimizing redundancy in classification. In a few cases we have, however, recognized some monofamilial orders (Ceratophyllales, Acorales, Arecales) because these are sister groups of more than one other order. Hence, the families of these monofamilial orders cannot be included in any other order without violating monophyly.

The principle of monophyly in combination with the mandatory usage of the family category (Greuter et al., 1994) may lead to the recognition of many small families. For example, in Dipsacales, if Dipsacaceae and Valerianaceae are to be retained as families separate from Caprifoliaceae, the principle of monophyly requires the recognition also of Diervillaceae, Linnaeaceae, and Morinaceae (Backlund & K. Bremer, 1998; Backlund & Pyck, 1998). This is because each of these latter families is the sister group of more than one family so they cannot be merged with any other family without violating monophyly. Similar considerations apply at the ordinal level. Unfortunately, no absolute guidelines as to reasonable practice can be offered, but we simply observe that caution is always in order.

In other cases there are small families that may be reduced to synonymy of their sister group if the

latter consists of a single family. Examples are Cabombaceae, which may be merged with Nymphaeaceae, and Kingdoniaceae, which may be merged with Circaeasteraceae (Ranunculales). Such commonly recognized families that nevertheless may be merged with their sister family are in our classification placed within square brackets below the family with which they may be merged (in Ranunculales either Fumariaceae or both Fumariaceae and Pteridophyllaceae may be merged with Papaveraceae; alternatively, either Pteridophyllaceae or both Fumariaceae and Pteridophyllaceae may be retained as distinct).

We do not attempt to thoroughly revise family circumscriptions. In general we follow recent authors and attempt to recognize as many monophyletic families as possible. It should be emphasized, however, that following additional investigation some families listed below may be shown to be non-monophyletic; revised circumscriptions, either by merging or splitting, into monophyletic taxa are not yet possible given our current knowledge. Examples are Euphorbiaceae and Flacourtiaceae of Malpighiales (Källersjö et al., 1998) and several families of Myrtales (Conti et al., 1996; Gadek et al., 1996) and core Caryophyllales (which comprise Achatocarpaceae, Aizoaceae, Amaranthaceae, Basellaceae, Cactaceae, Caryophyllaceae, Didiereaceae, Molluginaceae, Nyctaginaceae, Phytolaccaceae, Portulacaceae, Sarcobataceae, and Stegnospermataceae; Hershkovitz & Zimmer, 1997). Other probably non-monophyletic families that cannot yet be recircumscribed are Boraginaceae (euasterids I; Chase et al., 1993), Scrophulariaceae (Lamiales; Olmstead & Reeves, 1995), and Santalaceae (Santalales; Nickrent & Duff, 1996; Nickrent et al., 1998). Brassicaceae (Brassicales) include also the former, paraphyletic Capparaceae (Brassicaceae *sensu stricto* being nested inside Capparaceae; Judd et al., 1994; Rodman et al., 1996). A supposedly parallel case comprises Apiaceae and Araliaceae (Apiales), since the former have been assumed to be nested inside the latter (Plunkett et al., 1996). However, with a transfer of Hydrocotyloideae from Apiaceae to Araliaceae, it seems that two monophyletic families can be recognized, only a few genera remaining unplaced (Plunkett et al., 1997). Delimitation of Bombacaceae, Malvaceae, Sterculiaceae, and Tiliaceae (Malvales) is problematical, and only Malvaceae are monophyletic (Alverson et al., 1998; Bayer et al., 1999). Here all four are treated together as a single monophyletic family, Malvaceae *sensu lato* (Judd & Manchester, 1997).

Our proposed classification is a modification of

that conceived by Bremer et al. (1995, 1996, 1997) and since 1996 available on the Internet (Bremer et al., 1998). This classification is based on various recently published mostly molecular phylogenetic analyses (e.g., Chase et al., 1993; Chase et al., 1995; Bremer et al., 1994; Struwe et al., 1994; Nadot et al., 1995; Nickrent & Soltis, 1995; Soltis et al., 1995; Gadek et al., 1996; Gustafsson et al., 1996; Morton et al., 1996; Soltis & Soltis, 1997; Soltis et al., 1997; Anderberg et al., 1998; Backlund & B. Bremer, 1998; Bakker et al., 1998; Källersjö et al., 1998; Soltis et al., 1998; Thulin et al., 1998; further references above). The major differences are in the expansion of Alismatales (including also Araceae), Caryophyllales (including Drosseraceae, Nepenthaceae, Polygonaceae, Plumbaginaceae, and several other families outside the traditional, core Caryophyllales), the recognition of a comparatively widely circumscribed Rosales (including Rhamnaceae, Urticaceae, Moraceae, and their allies), in the addition of a number of smaller orders (Ceratophyllales, Acorales, Arecales, Proteales, Garryales, Aquifoliales), and in the deletion of a few others (Aristolochiales, Nymphaeales, Bromeliales, Trochodendrales, Zygophyllales). Monocots and eudicots are not formally ranked and named because it is not yet clear at which level they should be recognized. The same problems occur with commelinoids (a phylogenetically derived subgroup of monocots) and with rosids and asterids (subgroups of eudicots), although these are commonly known as subclasses Commelinidae, Rosidae, and Asteridae, respectively.

Well supported ordinal interrelationships are shown in Figure 1. Interrelationships among the basal branches of the tree and the position of the root of the flowering plant phylogeny remain elusive. Within the eudicots there is increasing support for a large subgroup with predominantly pentamerous and isomerous flowers, the core eudicots, mainly comprising Caryophyllales, Santalales, Saxifragales, rosids, and asterids. Rosids and asterids each comprise two large subgroups, eurosids I and II and euasterids I and II, also receiving increasing support as monophyletic. These correspond to the similarly numbered rosid and asterid clades of Chase et al. (1993).

Under each of the supraordinal groups of monocots, commelinoids, core eudicots, rosids, etc., there are a number of families listed without assignment to order. These families are known to belong within the major group under which they are listed, but their ordinal position is still uncertain. Similarly, Amborellaceae, Austrobaileyaceae, Cannellaceae, etc., are listed at the beginning because

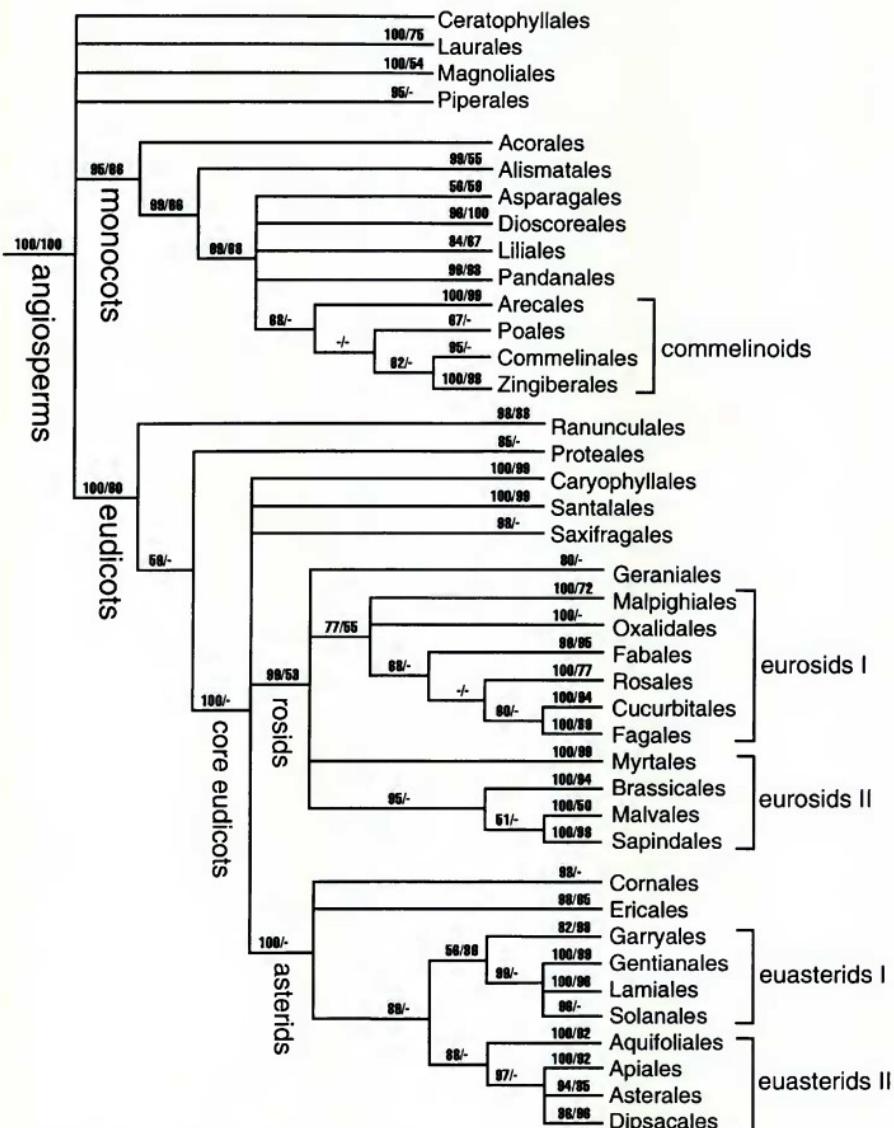


Figure 1. Phylogenetic interrelationships of the orders of flowering plants, compiled from recent cladistic analyses cited in the text. Jackknife support is given on the branches (a dash for values < 50%), first jackknife values from analysis of 545 sequences of the *rbcL*, *atpB*, and 18S rDNA genes (D. E. Soltis, M. W. Chase, P. S. Soltis, D. Albach, M. E. Mort, V. Savolainen, M. Zanis & J. S. Farris, unpublished, in prep.) and second jackknife values from analysis of 2538 *rbcL* sequences (Källersjö et al., 1998).

they belong neither in any of the phylogenetically "basal" orders at the beginning nor in the monocots or eudicots. Furthermore, families listed directly under monocots without an order are monocots but not commelinoids, and families similarly listed directly under eudicots and core eudicots are eudicots or core eudicots, respectively, but neither rosids nor asterids. At the end of the system is an additional list of families of uncertain position. Most of these are probably eudicots (including core eudicots, rosids, and asterids), but so far there are no firm data supporting their placement anywhere within the eudicots.

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CLASSIFICATION OF FLOWERING PLANTS

Amborellaceae	Limnocharitaceae
Austrobaileyaceae	Posidoniaceae
Canellaceae	Potamogetonaceae
Chloranthaceae	Ruppiaceae
Hydnoraceae	Scheuchzeriaceae
Illiaceae	Tofieldiaceae
Nymphaeaceae	Zosteraceae
[+ Cabombaceae]	
Rafflesiaceae	Asparagales Bromhead
Schisandraceae	Agapanthaceae
Trimeniaceae	Agavaceae
Winteraceae	Alliaceae
Ceratophyllales Bisch.	Amaryllidaceae
Ceratophyllaceae	Anemarrhenaceae
Laurales Perleb	Anericaceae
Atherospermataceae	Aphyllanthaceae
Calycanthaceae	Asparagaceae
Gomortegaceae	Asphodelaceae
Hernandiaceae	Asteliaceae
Lauraceae	Behniaceae
Monimiaceae	Blandfordiaceae
Siparunaceae	Boryaceae
Magnoliales Bromhead	Convallariaceae
Ammonaceae	Doryanthaceae
Degeneriaceae	Hemerocallidaceae
Eupomatiaceae	Herreriaceae
Himantandraceae	Hesperocallidaceae
Magnoliaceae	Hyacinthaceae
Myristicaceae	Hypoxidaceae
Piperales Dumort.	Iridaceae
Aristolochiaceae	Ixioliriaceae
Lactoridaceae	Lanariaceae
Piperaceae	Laxmanniaceae
Saururaceae	Orchidaceae
MONOCOTS	Tecophilaeaceae
Corsiaceae	Themidaceae
Japonoliriacae	Xanthorrhoeaceae
Nartheciaceae	Xeronemataceae
Petrosaviaceae	Dioscoreales Hook. f.
Triuridaceae	Burmanniaceae
Acorales Reveal	Dioscoreaceae
Acoraceae	Taccaceae
Alismatales Dumort.	Thismiaceae
Alismataceae	Trichopodaceae
Aponogetonaceae	Liliales Perleb
Araceae	Alstroemeriaeae
Butomaceae	Campynemataceae
Cymodoceaceae	Colchicaceae
Hydrocharitaceae	Liliaceae
Juncaginaceae	Luzuriagaceae
	Melanthiaceae
	Philesiaceae
	Ripogonaceae
	Smilacaceae

CLASSIFICATION OF FLOWERING PLANTS
(cont'd.)

Pandanales Lindl.

- Cyclanthaceae
- Pandanaceae
- Stemonaceae
- Velloziaceae

- Proteales Dumort.
- Nelumbonaceae
- Platanaceae
- Proteaceae

COMMELINOIDS

- Abolbodaceae
- Bromeliaceae
- Dasygordonaceae
- Hanguanaceae
- Mayacaceae
- Rapateaceae

Arecales Bromhead

- Arecaceae

- Ranunculales Dumort.
- Berberidaceae
- Circaeasteraceae
- [+ Kingdoniaceae]
- Eupteleaceae
- Lardizabalaceae
- Menispermaceae
- Papaveraceae
- [+ Fumariaceae]
- [+ Pteridophyllaceae]
- Ranunculaceae

Commelinaceae Dumort.

- Commelinaceae
- Haemodoraceae
- Philydraceae
- Pontederiaceae

CORE EUDICOTS

- Aextoxicaceae
- Berberidopsidaceae
- Dilleniaceae
- Gunneraceae
- Myrothamnaceae
- Vitaceae

Poales Small

- Anarthriaceae
- Centrolepidaceae
- Cyperaceae
- Ecdylocoleaceae
- Eriocaulaceae
- Flagellariaceae
- Hydatellaceae
- Joinvilleaceae
- Juncaceae
- Poaceae
- Prioniaceae
- Restionaceae
- Sparangiaceae
- Thurniaceae
- Typhaceae
- Xyridaceae

- Caryophyllales Perleb
- Achatocarpaceae
- Aizoaceae
- Amaranthaceae
- Ancistrocladaceae
- Asteropeiaceae
- Basellaceae
- Cactaceae
- Caryophyllaceae
- Didiereaceae
- Dioncophyllaceae
- Droseraceae
- Drosophyllaceae
- Frankeniacae
- Molluginaceae
- Nepenthaceae
- Nyctaginaceae
- Physenaceae
- Phytolaccaceae
- Plumbaginaceae
- Polygonaceae
- Portulacaceae
- Rhabdodendraceae
- Sarcobataceae
- Simmondsiaceae
- Stegnospermataceae
- Tamaricaceae

Zingiberales Griseb.

- Cannaceae
- Costaceae
- Heliconiaceae
- Loviaceae
- Marantaceae
- Musaceae
- Strelitziaceae
- Zingiberaceae

- Santalales Dumort.
- Olacaceae
- Opiliaceae

EUDICOTS

- Buxaceae
- Didymelaceae
- Sabiaceae
- Trochodendraceae
- [+ Tetracentraceae]

CLASSIFICATION OF FLOWERING PLANTS
(cont'd.)

Loranthaceae	Fabales Bromhead
Misodendraceae	Fabaceae
Santalaceae	Polygalaceae
Saxifragales Dumort.	Quillajaceae
Altingiaceae	Surianaceae
Cercidiphyllaceae	Fagales Engl.
Crassulaceae	Betulaceae
Daphniphyllaceae	Casuarinaceae
Grossulariaceae	Fagaceae
Haloragaceae	Juglandaceae
Hamamelidaceae	Myricaceae
Iteaceae	Nothofagaceae
Paeoniaceae	Rhoipteleaceae
Penthoraceae	Ticodendraceae
Pterostemonaceae	Malpighiales Mart.
Saxifragaceae	Achariaceae
Tetracarpaeaceae	Balanopaceae
ROSIDS	Caryocaraceae
Aphloioaceae	Chrysobalanaceae
Crossosomataceae	Clusiaceae
Ixerbaceae	Dichapetalaceae
Krameriaceae	Erythroxylaceae
Picramniaceae	Euphorbiaceae
Podostemaceae	Euproniaceae
Stachyuraceae	Flacourtiaceae
Staphyleaceae	Goupiaceae
Tristichaceae	Hugoniaceae
Zygophyllaceae	Humiriaceae
Geriales Dumort.	Irvingiaceae
Francoaceae	Ixonanthaceae
Geraniaceae	Lacistemataceae
[+Hypseocharitaceae]	Linaceae
Greyiaceae	Malesherbiaceae
Ledocarpaceae	Malpighiaceae
Melianthaceae	Medusagynaceae
Vivianiaceae	Ochnaceae
EUROSIDS I	Pandaceae
Celastraceae	Passifloraceae
Huaceae	Putranjivaceae
Parnassiaceae	Quiinaceae
[+Lepuropetalaceae]	Rhizophoraceae
Stackhousiaceae	Salicaceae
Cucurbitales Dumort.	Seyphostegiaceae
Anisophylleaceae	Trigoniaceae
Begoniaceae	Turneraceae
Coriariaceae	Violaceae
Corynocarpaceae	Oxalidales Heintze
Cucurbitaceae	Cephalotaceae
Datiscaceae	Connaraceae
Tetramelaceae	Cunoniaceae
	Elaeocarpaceae
	Oxalidaceae
	Tremandraceae

CLASSIFICATION OF FLOWERING PLANTS
(cont'd.)

Rosales	Perleb.	Onagraceae
	Barbeyaceae	Penaeaceae
	Cannabaceae	Psiloxylaceae
	Cecropiaceae	Rhynchosocalycaceae
	Celtidaceae	Vochysiaceae
	Dirachmaceae	
	Elaeagnaceae	Sapindales Dumort.
	Moraceae	Anacardiaceae
	Rhamnaceae	Biebersteiniaceae
	Rosaceae	Burseraceae
	Ulmaceae	Kirkiaceae
	Urticaceae	Meliaceae
EUROSIDS II		Nitrariaceae
	Tapisciaceae	[+Peganaceae]
Brassicales	Bromhead	Rutaceae
	Akaniaceae	Sapindaceae
	[+Bretschneideraceae]	Simaroubaceae
	Bataceae	
	Brassicaceae	ASTERIDS
	Caricaceae	Cornales Dumort.
	Emblingiaceae	Cornaceae
	Gyrostemonaceae	[+Nyssaceae]
	Koeberliniaceae	Grubbiaceae
	Limnanthaceae	Hydrangeaceae
	Moringaceae	Hydrostachyaceae
	Pentadiplandraceae	Loasaceae
	Resedaceae	
	Salvadoraceae	Ericales Dumort.
	Setchellanthaceae	Actinidiaceae
	Tovariaceae	Balsaminaceae
	Tropaeolaceae	Clethraceae
Malvales	Dumort.	Cyrillaceae
	Bixaceae	Diapensiaceae
	[+Diegodendraceae]	Ebenaceae
	Cistaceae	Ericaceae
	Cochlospermaceae	Fouquieriaceae
	Dipterocarpaceae	Halesiacae
	Malvaceae	Lecythidaceae
	Muntingiaceae	Marcgraviaceae
	Neuradaceae	Myrsinaceae
	Sarcolaenaceae	Pellicieraceae
	Sphaerosepalaceae	Polemoniaceae
	Thymelaeaceae	Primulaceae
Myrales	Rchb.	Roridulaceae
	Alzateaceae	Sapotaceae
	Combretaceae	Sarraceniaceae
	Crypteroniaceae	Styracaceae
	Heteropyxidaceae	Symplocaceae
	Lythraceae	Ternstroemiacae
	Melastomataceae	Tetrameristaceae
	Memecylaceae	Theaceae
	Myrtaceae	Theophrastaceae
	Oliniaceae	
EUASTERIDS I		
		Boraginaceae
		Plocospermataceae
		Vahliaeae

CLASSIFICATION OF FLOWERING PLANTS
(cont'd.)

Garryales Lindl.	Apiales Nakai
Aucubaceae	Apiaceae
Eucommiaceae	Araliaceae
Garryaceae	Aralidiaceae
Oncothecaceae	Griseliniaeae
Gentianales Lindl.	Melanophyllaceae
Apocynaceae	Pittosporaceae
Gelsemiaceae	Torriliaceae
Gentianaceae	Aquifoliales Senft
Loganiaceae	Aquifoliaceae
Rubiaceae	Helwingiaceae
Lamiales Bromhead	Phyllonomaceae
Acanthaceae	Asterales Lindl.
Avicenniaceae	Alseuosmiaceae
Bignoniaceae	Argophyllaceae
Buddlejaceae	Asteraceae
Byblidaceae	Calyceraceae
Cyclocheilaceae	Campanulaceae
Gesneriaceae	[+ Lobeliaceae]
Lamiaceae	Carpodetaceae
Lentibulariaceae	Donatiaceae
Myoporaceae	Goodeniaceae
Oleaceae	Menyanthaceae
Orobanchaceae	Pentaphragmataceae
Paulowniaceae	Phellinaceae
Pedaliaceae	Rousseaceae
[+ Martyniaceae]	Styliadiaceae
Phrymaceae	Dipsacales Dumort.
Plantaginaceae	Caprifoliaceae
Schlegeliaceae	Diervillaceae
Serophulariaceae	Dipsacaceae
Stilbaceae	Linnaeaceae
Tetrachondraceae	Morinaceae
Verbenaceae	Valerianaceae
Solanales Dumort.	FAMILIES OF UNCERTAIN POSITION
Convolvulaceae	Balanophoraceae
Hydroleaceae	Bonnetiaceae
Montiniaceae	Cardiopteridaceae
Solanaceae	Ctenolophonaceae
Sphenocleaceae	Cynomoriaceae
EUASTERIDS II	Cytinaceae
Adoxaceae	Dipentodontaceae
Bruniaceae	Elatinaceae
Carlemanniaceae	Geissolomataceae
Columelliaceae	Hoplestigmataceae
[+ Desfontainiaceae]	Kaliphoraceae
Eremosynaceae	Lepidobotryaceae
Escalloniaceae	Lissocarpaceae
Icacinaceae	Lophopyxidaceae
Polyosmaceae	Medusandraceae
Sphenostemonaceae	Metteniusaceae
Tribelaceae	Mitragastemonaceae
	Paracryphiaceae

CLASSIFICATION OF FLOWERING PLANTS
(cont'd.)

Pentaphylacaceae	Asarales Horan.
Peridiscaceae	= Piperales
Plagiopteraceae	Asclepiadales Dumort.
Pottingeriaceae	= Gentianales
Sladeniaceae	Asteliales Dumort.
Strasburgeriaceae	= Asparagales
Tepuianthaceae	Atriplicales Horan.
	= Caryophyllales
	Aucubales Takht.
	= Garryales
	Austrobaileyales Takht. ex Reveal
	- not accepted, family at beginning of system
	Avenales Bromhead
	= Poales
	Balanopales Engl.
	= Malpighiales
	Balanophorales Dumort.
	- not accepted, family unplaced
	Balsaminales Lindl.
	= Ericales
	Barbeyales Takht. & Reveal
	= Rosales
	Batales Engl.
	= Brassicales
	Begoniales Dumort.
	= Cucurbitales
	Berberidales Dumort.
	= Ranunculales
	Betulales Bromhead
	= Fagales
	Biebersteiniales Takht.
	= Sapindales
	Bignoniales Lindl.
	= Lamiales
	Bixales Lindl.
	= Malvales
	Boraginales Dumort.
	- not accepted, family under euasterids I
	Brexiales Lindl.
	- not accepted, family under eurosid I
	Bromeliales Dumort.
	- not accepted, family under commelinoids
	Bruniales Dumort.
	- not accepted, family under euasterids II
	Brunoniales Lindl.
	= Asterales
	Burmanniaceae Heintze
	= Dioscoreales
	Burserales Baskerville
	= Sapindales
	Butomales Hutch.
	= Alismatales

CLASSIFICATION OF FLOWERING PLANTS
(cont'd.)

Buxales Takht. ex Reveal	Citrales Dumort.
- not accepted, family under eudicots	= Sapindales
Byblidales Nakai ex Reveal	Cocosales Nakai
= Lamiales	= Arecales
Cactales Dumort.	Colchicales Dumort.
= Caryophyllales	= Liliales
Callitrichales Dumort.	Combretales Baskerville
= Lamiales	= Mytales
Calycanthales Mart.	Connarales Takht. ex Reveal
= Laurales	= Cunoniales
Calycerales Takht. ex Reveal	Convolvulales Dumort.
= Asterales	= Solanales
Campanulales Rchb.	Coriariales Lindl.
= Asterales	= Cucurbitales
Canellales Cronquist	Corylales Dumort.
- not accepted, family at beginning of system	= Fagales
Cannales Dumort.	Corynocarpales Takht.
= Zingiberales	= Cucurbitales
Capparales Hutch.	Crassulales Lindl.
= Brassicales	= Saxifragales
Caprifoliales Lindl.	Crossosomatales Takht. ex Reveal
= Dipsacales	- not accepted, family under rosids
Cardiopteridales Takht.	Cunoniales Hutch.
- not accepted, family under euasterids II	= Oxalidales
Carduales Small	Cyclanthales J. H. Schaffn.
= Asterales	= Pandanales
Caricales L. D. Benson	Cymodoceales Nakai
= Brassicales	= Alismatales
Cassiales Horan.	Cynomorales Burnett
= Fabales	- not accepted, family unplaced
Casuarinales Lindl.	Cyperales Hutch.
= Fagales	= Poales
Celastrales Baskerville	Cytinales Dumort.
- not accepted, family under euroids I	- not accepted, family unplaced
Centrolepidales Takht.	Daphnales Lindl.
= Poales	= Malvales
Cephalotales Nakai	Daphniphyllales Pulle ex Cronquist
= Oxalidales	= Saxifragales
Cercidiphyllales Hu ex Reveal	Datiscales Dumort.
= Saxifragales	= Cucurbitales
Chenopodiales Dumort.	Desfontainiales Takht.
= Caryophyllales	- not accepted, family under euasterids II
Chironiales Griseb.	Diapensiales Engl. & Gilg
= Gentianales	= Ericales
Chloranthales A. C. Sm. ex J. -F. Leroy	Didymelales Takht.
- not accepted, family at beginning of system	- not accepted, family under eudicots
Cinchonales Lindl.	Dilleniales Hutch.
= Gentianales	- not accepted, family under core eudicots
Circaeasterales Takht.	Dioncophyllales Takht. ex Reveal
= Ranunculales	= Caryophyllales
Cistales Rchb.	Diospyrales Prantl
= Malvales	= Ericales

CLASSIFICATION OF FLOWERING PLANTS
(cont'd.)

Ebenales Engl.	Gyrostemonales Takht.
= Ericales	= Brassicales
Elaeagnales Bromhead	Haemodorales Hutch.
= Rosales	= Commelinales
Elaeocarpales Takht.	Haloragales Bromhead
= Oxalidales	= Saxifragales
Elatinales Nakai	Hamamelidales Griseb.
- not accepted, family unplaced	= Saxifragales
Elodeales Nakai	Hanguanales R. Dahlgren ex Reveal
= Alismatales	= not accepted, family under commelinoids
Empetrales Raf.	Helleborales Nakai
= Ericales	= Ranunculales
Eriocaulales Nakai	Helwingiales Takht.
= Poales	= Aquifoliales
Eucommiales Nemeje ex Cronquist	Himantandrales Doweld & Shevyryova
= Garryales	= Magnoliales
Euphorbiales Lindl.	Hippuridales Pulle ex Reveal
= Malpighiales	= Lamiales
Eupomatiaceae Takht. ex Reveal	Homaliales Bromhead
= Magnoliales	= Malpighiales
Eupteleales Hu ex Reveal	Hortensiidales Griseb.
= Ranunculales	= Cornales
Euryalales H.L.Li	Hydatellales Cronquist
- not accepted, family at beginning of system	= Poales
Ficales Dumort.	Hydnorales Takht. ex Reveal
= Rosales	- not accepted, family at beginning of system
Flacourtiaceae Heintze	Hydrangeales Nakai
= Malpighiales	= Cornales
Fouquieriales Takht. ex Reveal	Hydrastidales Takht.
= Ericales	= Ranunculales
Francoaceae Takht.	Hydroptilidales (Bartl.) Spenn.
= Geraniales	- not accepted, family Nymphaeaceae at beginning of
Frangulaceae Wirtg.	Hydrostachyales Diels ex Reveal
= Rosales	= Cornales
Galiales Bromhead	Hypericaceae Dumort.
= Gentianales	= Malpighiales
Geissolomatales Takht. ex Reveal	Hypoxidales Takht.
- not accepted, family unplaced	= Asparagales
Gesneriales Dumort.	Icacinales Tiegh. ex Reveal
= Lamiales	- not accepted, family under euasterids II
Glaucidiales Takht. ex Reveal	Illiciales Hu ex Cronquist
= Ranunculales	- not accepted, family at beginning of system
Globulariales Dumort.	Iridaceae Raf.
= Lamiales	= Asparagales
Goodeniales Lindl.	Ixiolae Lindl.
= Asteiales	= Asparagales
Greyiales Takht.	Jasminales Dumort.
= Geraniales	= Lamiales
Grossulariales Lindl.	Juglandales Dumort.
= Saxifragales	= Fagales
Gunnerales Takht. ex Reveal	
- not accepted, family under core eudicots	
Gyrocarpales Dumort.	
= Laurales	

CLASSIFICATION OF FLOWERING PLANTS
(cont'd.)

Julianiales Engl.	Mitrastemonales Makino
= Sapindales	- not accepted, family unplaced
Juncaginiales Hutch.	Monimiiales Dumort.
= Alismatales	= Laurales
Juncales Dumort.	Moringales Nakai
= Poales	= Brassicales
Lacistematales Baskerville	Myricales Engl.
= Malpighiales	= Fagales
Lactoridales Takht. ex Reveal	Myristicales Thomé
= Piperales	= Magnoliales
Lardizabalales Loconte	Myrothamnales Nakai ex Reveal
= Ranunculales	- not accepted, family under core
Lecythidales Cronquist	eudicots
= Ericales	Myrsinales Spenn.
Leitneriales Engl.	= Ericales
= Sapindales	Najadales Dumort.
Lentibulariales Lindl.	= Alismatales
= Lamiales	Narcissales Dumort.
Ligustrales Bartl. ex Bisch.	= Asparagales
= Lamiales	Nartheciaceles Reveal & Zomlefer
Limnanthales Nakai	- not accepted, family under
= Brassicales	monocots
Linales Baskerville	Nelumbonales Reveal
= Malpighiales	= Proteales
Loasales Bessey	Nepenthales Dumort.
= Cornales	= Caryophyllales
Loganiaceae Lindl.	Nolanales Lindl.
= Gentianales	= Solanales
Lonicerales T. Liebe	Nyctaginaceles Dumort.
= Dipsacales	= Caryophyllales
Loranthales Dumort.	Nymphaeales Dumort.
= Santalales	- not accepted, family at beginning
Lythrales Caruel	of system
= Myrtales	Ochnales Hutch. ex Reveal
Marathrales Dumort.	= Malpighiales
- not accepted, family	Oenotherales Bromhead
Podostemaceae under rosids	= Myrtales
Mayacales Nakai	Olaceales Benth.
- not accepted, family under	= Santalales
commelinoids	Oleales Lindl.
Medusagynales Takht.	= Lamiales
= Malpighiales	Onagrales Rehb.
Medusandrales Brenan	= Myrtales
- not accepted, family unplaced	Opuntiales Willk.
Melanthiales R. Dahlgren ex Reveal	= Caryophyllales
= Liliales	Orchidales Raf.
Melastomatales Oliv.	= Asparagales
= Myrtales	Paeoniales Heintze
Meliaceae Lindl.	= Saxifragales
= Sapindales	Pandanaceae Engl. & Gilg
Menispermatales Bromhead	= Malpighiales
= Ranunculales	Papaverales Dumort.
Menyanthales T. Yamaz. ex Takht.	= Ranunculales
= Asterales	Paracryphiales Takht.
Metteniusales Takht.	- not accepted, family unplaced
- not accepted, family unplaced	Paridales Dumort.
	= Liliaceae

CLASSIFICATION OF FLOWERING PLANTS
(cont'd.)

Parnassiales Nakai	Rhinanthales Dumort.
- not accepted, family under eurosid I	= Lamiales
Passiflorales Dumort.	Rhizophorales Tiegh. ex Reveal
= Malpighiales	= Malpighiales
Penaeales Lindl.	Rhodorales Horan.
= Myrtales	= Ericales
Petiveriales Lindl.	Rhoipteleales Novák ex Reveal
= Caryophyllales	= Fagales
Petrosaviales Takht.	Roridulales Nakai
- not accepted, family under monocots	= Ericales
Phydriales Dumort.	Rubiales Dumort.
= Commelinales	= Gentianales
Physenales Takht.	Ruppiales Nakai
= Caryophyllales	= Alismatales
Pinguiculales Dumort.	Rutales Perleb
= Lamiales	= Sapindales
Pittosporales Lindl.	Sabiales Takht.
= Apiales	- not accepted, family under eudicots
Plantaginales Lindl.	Salicales Lindl.
= Lamiales	= Malpighiales
Platanales J. H. Schaffn.	Salvadorales R. Dahlgren ex Reveal
= Proteales	= Brassicales
Plumbaginales Lindl.	Samolales Dumort.
= Caryophyllales	= Ericales
Podophyllales Dumort.	Samydales Dumort.
= Ranunculales	= Malpighiales
Podostemales Lindl.	Sanguisorbales Dumort.
= not accepted, family under rosids	= Rosales
Polemoniales Bromhead	Sapotales Hook. f.
= Ericales	= Ericales
Polygalales Dumort.	Sarraceniales Bromhead
= Fabales	= Ericales
Polygonales Dumort.	Scheuchzeriales B. Boivin
= Caryophyllales	= Alismatales
Pontederiales Hook. f.	Scleranthes Dumort.
= Commelinales	= Caryophyllales
Portulacales Dumort.	Scrophulariales Lindl.
= Caryophyllales	= Lamiales
Posidoniales Nakai	Scyphostegiales Croizat
= Alismatales	= Malpighiales
Potamogetonales Dumort.	Sedales Rchb.
= Alismatales	= Saxifragales
Primulales Dumort.	Silenes Lindl.
= Ericales	= Caryophyllales
Quercales Burnett	Simmondsiales Reveal
= Fagales	= Caryophyllales
Rafflesiales Oliv.	Smilacales Lindl.
- not accepted, family at beginning of system	= Liliales
Resedales Dumort.	Stellariales Dumort.
= Brassicales	= Caryophyllales
Restionales J. H. Schaffn.	Styliidales Takht. ex Reveal
= Poales	= Asterales
Rhamnales Dumort.	Styracales Bisch.
= Rosales	= Ericales

CLASSIFICATION OF FLOWERING PLANTS
(cont'd.)

Tamales Dumort.
= Dioscoreales
Tamaricales Hutch.
= Caryophyllales
Tecophilaeales Traub ex Reveal
= Asparagales
Theales Lindl.
= Ericales
Thelionales Nakai
= Gentianales
Thymelaeales Willk.
= Malvales
Tiliaceae Caruel
= Malvales
Tofieldiales Reveal & Zomlefer
= Alismatales
Torricelliales Takht. ex Reveal
= Apiales
Tovariaceae Nakai
= Brassicales
Trilliaceae Takht.
= Liliales
Triuridales Hook. f.
- not accepted, family under monocots
Trochodendrales Takht. ex Cronquist
- not accepted, family under
eudicots
Tropaeolales Takht. ex Reveal
= Brassicales
Turneriales Dumort.
= Malpighiales
Typhales Dumort.
= Poales
Ulmaceae Lindl.
= Rosales
Urticales Dumort.
= Rosales
Vacciniales Dumort.
= Ericales
Vallisneriales Nakai
= Alismatales
Velloziales R. Dahlgren ex Reveal
= Pandanales
Veratales Dumort.
= Liliales
Verbenales Horan.
= Lamiales
Viburnales Dumort.
- not accepted, family under
euasterids II
Vincales Horan.
= Gentianales
Violales Perleb
= Malpighiales
Vitales Reveal
- not accepted, family under core
eudicots

Vochysiaceae Dumort.
= Myrtales
Winterales A. C. Sm. ex Reveal
- not accepted, family at beginning
of system
Xyridales Lindl.
= Poales
Zosterales Nakai
= Alismatales
Zygophyllales Takht.
- not accepted, family under rosids

SELECTED FAMILIAL SYNONYMS

Abrophyllaceae
= Carpodetaceae
Acanthochlamydaceae
= Velloziaceae
Aceraceae
= Sapindaceae
Achradaeae
= Sapotaceae
Aegicerataceae
= Myrsinaceae
Agdestidaceae
= Phytolaccaceae
Aitoniacae
= Meliaceae
Alangiaceae
= Cornaceae
Aloaceae
= Asphodelaceae
Alsinaceae
= Caryophyllaceae
Ambrosiaceae
= Asteraceae
Amygdalaceae
= Rosaceae
Androstachyaceae
= Euphorbiaceae
Antoniaceae
= Loganiaceae
Apodanthaceae
= Rafflesiaceae
Apostasiaceae
= Orchidaceae
Aptandraceae
= Olacaceae
Aristoliciaceae
= Elaeocarpaceae
Asclepiadaceae
= Apocynaceae
Asteranthaceae
= Lecythidaceae
Averrhoaceae
= Oxalidaceae
Avetaceae
= Dioscoreaceae

CLASSIFICATION OF FLOWERING PLANTS
(cont'd.)

Balanitaceae	Capparaceae
= Zygophyllaceae	= Brassicaceae
Barbeiaceae	Carduaceae
= Phytolaccaceae	= Asteraceae
Barclayaceae	Cassythaceae
= Nymphaeaceae	= Lauraceae
Barringtoniaceae	Chailletiaceae
= Lecythidaceae	= Dichapetalaceae
Baueraceae	Chenopodiaceae
= Cunoniaceae	= Amaranthaceae
Baxteriaceae	Chionographidaceae
= Dasypogonaceae	= Melanthiaceae
Bembiciaceae	Chloanthaceae
= Flacourtiaceae	= Lamiaceae
Berzeliiaceae	Cichoriaceae
= Bruniaceae	= Asteraceae
Bischofiaceae	Cleomaceae
= Euphorbiaceae	= Brassicaceae
Blepharocaryaceae	Cneoraceae
= Anacardiaceae	= Rutaceae
Boerlagellaceae	Cobaeaceae
= Sapotaceae	= Polemoniaceae
Bombacaceae	Compositae
= Malvaceae	= Asteraceae
Boopidaceae	Conostylidaceae
= Calyceraceae	= Haemodoraceae
Bretschneideraceae	Cordiaceae
= Akaniaceae	= Boraginaceae
Brexiaceae	Coridaceae
= Celastraceae	= Primulaceae
Brunelliaceae	Corokiaceae
= Cunoniaceae	= Argophyllaceae
Brunoniaceae	Corylaceae
= Goodeniaceae	= Betulaceae
Bumeliaceae	Croomiaceae
= Sapotaceae	= Stemonaceae
Burchardiaceae	Cruciferae
= Colchicaceae	= Brassicaceae
Byttneriaceae	Curtisiaceae
= Malvaceae	= Cornaceae
Cabombaceae	Cuscutaceae
= Nymphaeaceae	= Convolvulaceae
Caesalpiniaceae	Cyananthaceae
= Fabaceae	= Campanulaceae
Calectasiaceae	Cyanastraceae
= Dasygagnaceae	= Tecophilaeaceae
Callitrichaceae	Cynocrambaceae nom. illeg.
= Plantaginaceae	= Rubiaceae
Calochortaceae	Cyphiaceae
= Liliaceae	= Campanulaceae
Camelliaceae	Cyphocarpaceae
= Theaceae	= Campanulaceae
Canotiaceae	Cypripediaceae
= Celastraceae	= Orchidaceae
Cansjeraceae	Dactylanthaceae
= Opiliaceae	= Balanophoraceae

CLASSIFICATION OF FLOWERING PLANTS
(cont'd.)

Davidiaceae	Frangulaceae
= Cornaceae	= Rhamnaceae
Davidsoniaceae	Fumariaceae
= Cunoniaceae	= Papaveraceae
Decaisneaceae	Funkiaceae
= Lardizabalaceae	= Agavaceae
Desfontainiaceae	Galacaceae
= Columelliaceae	= Diapensiaceae
Dialypetalanthaceae	Geitonoplesiaceae
= Rubiaceae	= Hemerocallidaceae
Dianellaceae	Geniostomaceae
= Hemerocallidaceae	= Loganiaceae
Dichondraceae	Geosiridaceae
= Convolvulaceae	= Iridaceae
Diclidantheraceae	Gisekiaceae
= Polygalaceae	= Phytolaccaceae
Diegodendraceae	Glaucidiaceae
= Bixaceae	= Ranunculaceae
Dionaeaceae	Globulariaceae
= Droseraceae	= Plantaginaceae
Dracaenaceae	Goetzeaceae
= Convallariaceae	= Solanaceae
Duabangaceae	Gonystylaceae
= Lythraceae	= Thymelaeaceae
Duckeodendraceae	Gouaniaceae
= Solanaceae	= Rhamnaceae
Dulongiaceae nom. illeg.	Gramineae
= Phyllonomaceae	= Poaceae
Dysphaniaceae	Gronoviaceae
= Amaranthaceae	= Loasaceae
Ehretiaceae	Gustaviaceae
= Boraginaceae	= Lecythidaceae
Ellisiophyllaceae	Guttiferae
= Scrophulariaceae	= Clusiaceae
Empetraceae	Gyrocarpaceae
= Ericaceae	= Hernandiaceae
Epacridaceae	Halophilaceae
= Ericaceae	= Hydrocharitaceae
Eremolepidaceae	Halophytaceae
= Santalaceae	= Amaranthaceae
Eriospermaceae	Hectorellaceae
= Convallariaceae	= Portulacaceae
Erycibaceae	Heliotropiaceae
= Convolvulaceae	= Boraginaceae
Erythropalaceae	Heloniadaceae
= Olacaceae	= Melanthiaceae
Eucryphiaceae	Helosidaceae
= Cunoniaceae	= Balanophoraceae
Euryalaceae	Henriqueziaceae
= Nymphaeaceae	= Rubiaceae
Exocarpaceae	Hippocastanaceae
= Santalaceae	= Sapindaceae
Flindersiaceae	Hippocrateaceae
= Rutaceae	= Celastraceae
Foetidiaceae	Hippuridaceae
= Lecythidaceae	= Plantaginaceae

CLASSIFICATION OF FLOWERING PLANTS
(cont'd.)

Hortoniaceae	Lepuropetalaceae
= Monimiaceae	= Parnassiaceae
Hostaceae	Lilaeaceae
= Agavaceae	= Juncaginaceae
Humbertiaceae	Limoniaceae
= Convolvulaceae	= Plumbaginaceae
Hydrastidaceae	Liriiodendraceae
= Ranunculaceae	= Magnoliaceae
Hydrocotylaceae	Lobeliaceae
= Araliaceae	= Campanulaceae
Hydropeltidaceae	Lomandraceae
= Nymphaeaceae	= Laxmanniaceae
Hydrophyllaceae	Lophiraceae
= Boraginaceae	= Ochnaceae
Hymenocardiaceae	Lophophytaceae
= Euphorbiaceae	= Balanophoraceae
Hypecoaceae	Luxemburgiaceae
= Papaveraceae	= Ochnaceae
Hypericaceae	Malaceae
= Clusiaceae	= Rosaceae
Hypseocharitaceae	Martyniaceae
= Geraniaceae	= Pedaliaceae
Idiospermaceae	Mastixiaceae
= Calycanthaceae	= Cornaceae
Illecebraceae	Medeolaceae
= Caryophyllaceae	= Liliaceae
Jasionaceae	Meliosmaceae
= Campanulaceae	= Sabiaceae
Jasminiaceae	Mendonciaceae
= Oleaceae	= Acanthaceae
Johnsoniaceae	Mesembryanthemaceae
= Hemerocallidaceae	= Aizoaceae
Julianiaciae	Mimosaceae
= Anacardiaceae	= Fabaceae
Kiggelariaceae	Monotaceae
= Flacourtiaceae	= Dipterocarpaceae
Kingdoniaceae	Monotropaceae
= Circaeasteraceae	= Ericaceae
Kirengeshomaceae	Mouririaceae
= Hydrangeaceae	= Memecylaceae
Labiatae	Moutabeaceae
= Lamiaceae	= Polygalaceae
Langsdorffiaaceae	Myriophyllaceae
= Balanophoraceae	= Haloragaceae
Lecaceae	Mystropetalaceae
= Vitaceae	= Balanophoraceae
Leguminosae	Najadaceae
= Fabaceae	= Hydrocharitaceae
Leitneriaceae	Nandinaceae
= Simaroubaceae	= Berberidaceae
Lemnaceae	Napoleonaceae
= Araceae	= Lecythidaceae
Lennoaceae	Naucleaceae
= Boraginaceae	= Rubiaceae
Leoniaceae	Nectaropetalaceae
= Violaceae	= Erythroxylaceae

CLASSIFICATION OF FLOWERING PLANTS
(cont'd.)

Nelsoniaceae	Pistidiaceae
= Acanthaceae	= Araceae
Nemacladaceae	Platystemonaceae
= Campanulaceae	= Papaveraceae
Nesogenaceae	Plumeriaceae
= Cyclocheilaceae	= Apocynaceae
Nolanaceae	Podoaceae
= Solanaceae	= Anacardiaceae
Nolinaceae	Podophyllaceae
= Convallariaceae	= Berberidaceae
Nupharaceae	Polygonanthaceae
= Nymphaeaceae	= Anisophylleaceae
Nyctanthaceae	Potaliaceae
= Oleaceae	= Gentianaceae
Nyssaceae	Ptaeroxylaceae
= Cornaceae	= Rutaceae
Octoknemaceae	Pteridophyllaceae
= Olacaceae	= Papaveraceae
Oftiaceae	Punicaceae
= Scrophulariaceae	= Lythraceae
Ophiopogonaceae	Pyrolaceae
= Convallariaceae	= Ericaceae
Osyridaceae	Ranzaniaceae
= Santalaceae	= Berberidaceae
Pachysandraceae	Reaumuriaceae
= Buxaceae	= Tamaricaceae
Palmae	Retziaceae
= Arecaceae	= Stilbaceae
Papilionaceae	Rhinanthaceae
= Fabaceae	= Orobanchaceae
Peganaceae	Rhodoleiaceae
= Nitrariaceae	= Hamamelidaceae
Pentastemonaceae	Rhopalocarpaceae
= Stemonaceae	= Sphaerosepalaceae
Peperomiaceae	Rhynchothecaceae
= Piperaceae	= Ledocarpaceae
Periplocaceae	Roxburghiaceae
= Apocynaceae	= Stemonaceae
Peripterygiaceae	Ruscaceae
= Cardiopteridaceae	= Convallariaceae
Petermanniaceae	Saccifoliaceae
= Colchicaceae	= Gentianaceae
Petriiveriaceae	Salaciaceae
= Phytolaccaceae	= Celastraceae
Philadelphaceae	Salicorniaceae
= Hydrangeaceae	= Amaranthaceae
Phormiaceae	Salpiglossidaceae
= Hemerocallidaceae	= Solanaceae
Phyllaceae	Sambucaceae
= Rhamnaceae	= Adoxaceae
Picrodendraceae	Samolaceae
= Euphorbiaceae	= Primulaceae
Pinguiculaceae	Saniculaceae
= Lentibulariaceae	= Apiaceae
Pistaciaceae	Sarcophytaceae
= Anacardiaceae	= Balanophoraceae

CLASSIFICATION OF FLOWERING PLANTS
(cont'd.)

Sarcospermataceae	Tetradiclidaceae
= Sapotaceae	= Peganaceae
Sargentodoxaceae	Tetragoniaceae
= Lardizabalaceae	= Aizoaceae
Saurauiaceae	Tetrastylidiaceae
= Actinidiaceae	= Olacaceae
Sauvagesiaceae	Thalassiaceae
= Ochnaceae	= Hydrocharitaceae
Scaevolaceae	Theligonaceae
= Goodeniaceae	= Rubiaceae
Scepaceae	Thunbergiaceae
= Euphorbiaceae	= Acanthaceae
Schoepfiaeae	Tiliaceae
= Olacaceae	= Malvaceae
Sclerophylacaceae	Trapaceae
= Solanaceae	= Lythraceae
Scoliopaceae	Trapellaceae
= Liliaceae	= Pedaliaceae
Seybaliaaceae	Tribulaceae
= Balanophoraceae	= Zygophyllaceae
Scytopetalaceae	Tricyrtidaceae
= Lecythidaceae	= Liliaceae
Selaginaceae	Trilliaceae
= Scrophulariaceae	= Melanthiaceae
Sesamaceae	Triplostegiaceae
= Pedaliaceae	= Valerianaceae
Sesuviaiceae	Uapacaceae
= Aizoaceae	= Euphorbiaceae
Simethidaceae	Ullucaceae
= Hemerocallidaceae	= Basellaceae
Siphonodontaceae	Umbelliferae
= Celastraceae	= Apiaceae
Sonneratiaceae	Utriculariaceae
= Lythraceae	= Lentibulariaceae
Spigeliaceae	Uvulariaceae
= Loganiaceae	= Colchicaceae
Stenomeridaceae	Vacciniaceae
= Dioscoreaceae	= Ericaceae
Sterculiaceae	Viburnaceae
= Malvaceae	= Adoxaceae
Stilaginaceae	Viscaceae
= Euphorbiaceae	= Santalaceae
Strychnaceae	Viticaceae
= Loganiaceae	= Lamiaceae
Stylobasiaceae	Walleriaceae
= Surianaceae	= Tecophilaeaceae
Stylocerataceae	Wellstediaceae
= Buxaceae	= Boraginaceae
Sympcoremataceae	Xanthophyllaceae
= Lamiaceae	= Polygalaceae
Syringaceae	Xerophyllaceae
= Oleaceae	= Melanthiaceae
Tetracentraceae	Zannichelliaceae
= Trochodendraceae	= Potamogetonaceae